



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,232	08/03/2001	Rajko Milovanovic	TI-32647	9094
23494	7590	04/04/2008		
TEXAS INSTRUMENTS INCORPORATED				
P O BOX 655474, M/S 3999				
DALLAS, TX 75265				
EXAMINER				
NGUYEN BA, HOANG VU A				
ART UNIT		PAPER NUMBER		
2623				
NOTIFICATION DATE		DELIVERY MODE		
04/04/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@ti.com

uspto@dlmail.itg.ti.com

Office Action Summary

Application No.

09/923,232

Applicant(s)

MILOVANOVIC ET AL.

Examiner

Hoang-Vu A. Nguyen-Ba

Art Unit

2623

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10, 12, 29, 34, 46, 49, 52 and 55-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 10, 12, 29, 34, 46, 49, 52 and 55-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/3508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

1. This action is responsive to amendment after non-final rejection filed January 7, 2008.
2. Claims 1, 10, 12, 29, 34, 46, 49, 52 and 55-58 remain pending. Claims 1, 10, 12, 29, 34, 46, 49 and 52 are independent claims.

Response to Arguments

3. Applicants' arguments at pp. 8-11 in the Remarks filed concurrently with the above-mentioned Amendment have been fully considered but are not deemed persuasive. Following is an examiner's response to Applicants' arguments.

Applicants' arguments:

Claims 1, 10, 12 and 29 recite subject matter not made obvious by the combination of Merjanian and Darbee et al. Claims 1, 10, 12 and 29 recite "some control keys disposed in a thumb actuated cross configuration" and "the fingerprint sensor is integrated within a middle portion of the thumb operated cross configuration." The OFFICE ACTION admits that Merjanian does not disclose this limitation but cites Darbee et al as teaching the recited thumb actuated cross configuration. The OFFICE ACTION fails to provide any motivation for incorporating the fingerprint sensor of Merjanian into the OK key of Darbee et al. In contrast, this application states at page 11, lines 13 to 17:

"The illustrated embodiment has an arrangement in which the volume up/down keys 43 and channel up/down keys 45 are positioned in a thumb operated cross 40, with the finger print apparatus 26 located in the middle of the cross 40. This arrangement allows non-participatory identification of the user by analyzing the user's thumbprint when the user changes channels or the volume."

This application also provides clear teaching of the advantage of such "non-participatory identification of the user." There is no teaching in either reference that such a combination is feasible or advantageous. Note that Merjanian illustrates in Figure 7 platen 30 exposed to the user's digit and a set of keys 212H, 212I, 212J and 212K disposed in a cross configuration omitting the claimed middle portion. Darbee et al teaches a keyboard 15 including a cross configuration of keys with a middle OK key. Darbee et al also discloses at column 4, lines 5 to 11 a fingerprint recognition device. Accordingly, both references teach the essential parts of these claims. However, neither reference includes any teaching that a fingerprint sensor can be used with a middle portion of a set of thumb actuated control keys in a cross configuration. The Applicants respectfully submit that the existence of the separate parts of the claimed invention in the prior art without the claimed combination is evidence of unobviousness. Accordingly, claims 1, 10, 12 and 29 are allowable over the combination of Merjanian and Darbee et al.

The OFFICE ACTION states at page 3, lines 33 to 38; page 7, lines 18 to 24; page 8, line 25 to page 9, line 5; page 10, lines 1 to 7; page 11, line 23 to page 12, line 4; page 12, line 21 to page 13, line 3; page 13, line 22 to page 13, line 3; and page 14, line 24 to page 15 line 6:

"Because of the nature of the downloaded materials that depend upon the identification of the user, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to integrate the fingerprint sensor of Merjanian within the OK or PPV control key as this would enable or activate the remote controller to download the materials subsequent to a successful validation of the id of the user, thereby providing the right materials to the right user."

The Applicant respectfully submits this argument fails to show that the combination of Merjanian and Darbee et al makes obvious this limitation of claims 1, 10, 12 and 29. Neither reference explicitly teaches the combination of fingerprint sensor and a middle portion of the thumb operated cross configuration as recited in the claims. Both references include control buttons in a cross configuration (Merjanian Figure 7, buttons 212H, 212I, 212J and 212K omitting the recited middle portion; Darbee et al Figure 1, arrow buttons and OK button). Both references include fingerprint sensors (Merjanian, Figure 7, 3; Darbee et al at column 4, lines 5 to 11). Further, both references condition some actions upon correctly identifying the user via a fingerprint. Thus it is clear that the combination of the fingerprint sensor and the middle portion of the thumb operated cross configuration of control keys is not obvious from these references. In the absence of express teaching of this combination or of the non-participatory identification taught in this application, this combination is not obvious. Accordingly, claims 1, 10, 12 and 29 are allowable over the combination of Merjanian and Darbee et al.

Examiner's response:

In response to Applicants' assertion that the Final Rejection fails to provide any motivation for incorporating the fingerprint sensor of Merjanian into the OK key of Darbee, the examiner respectfully directs Applicants' attention to p. 4, last paragraph and p. 5, first paragraph, which states:

"However, in an analogous art, Darbee teaches a remote control device with an OK, or PPV control key disposed within the middle portion of the thumb operated cross configuration (see at least FIG. 1) for the purpose of selectively downloading advertising and programming data to be stored on the remote control depending upon identification of the user of the remote control or based upon some assessment of the viewing habits or preferences of the user (3:31-39), or selecting the PPV option. Because of the nature of the downloaded materials that depend upon the identification of the user, it would have been obvious to a person of ordinary skill in the art at the time the

invention was made to integrate the fingerprint sensor of Merjanian within the OK or PPV control key as this would enable or activate the remote controller to download the materials subsequent to a successful validation of the id of the user, thereby providing the right materials to the right user.”

In response to Applicants’ assertion that “the existence of the separate parts of the claimed invention in the prior art without the claimed combination is evidence of unobviousness,” the examiner respectfully notes that the motivation for the combination of Merjanian with Darbee is clearly articulated in the above-cited portion of the previous Office action.

In response to Applicant’s assertion that the motivation articulated in the previous office action fails to show that the combination of Merjanian and Darbee et al makes obvious the combination of fingerprint sensor and a middle portion of the thumb operated cross configuration as recited in the claim, the examiner respectfully submits that both Merjanian and Darbee et al. teach the claimed “fingerprint sensor” and Darbee teaches the “OK” button which meets the claimed “middle portion of the thumb operated cross configuration.” Therefore, there would have been a reasonable expectation of success to combine Merjanian and Darbee et al. to achieve the claimed invention because, besides the motivation given in the previous office action, neither Merjanian nor Darbee et al.’s explicitly suggests that modification of either one of the two and/or combination of the two would render such a modification and/or combination inoperative.

Furthermore, the examiner respectfully notes that KSR forecloses the argument that a **specific** teaching, suggestion, or motivation is required to support a finding of obviousness. See the recent Board decision *Ex parte Smith*, -- USPQ2d --, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007)(citing *KSR*,

82 USPQ2d at 1396)(available at <http://www.uspto.gov/web/offices/dcom/bpai/prec/fd071925.pdf>).

In response to Applicant's argument that in the absence of express teaching of non-participatory identification taught in the present application, the combination is not obvious, it is noted that the specific limitation "non-participatory identification" is not in any of the independent claims. even assuming, *arguendo*, that the claims recite such a limitation, it is noted that non-participatory identification is interpreted as equivalent to the aspect of Merjanian's invention that allows for adjusting the service level at the same time the fingerprint is read (see at least 3:31-39). Alternatively stated, the process does not require the user to perform any additional step (i.e., non-participatory identification) in order to access the channels the user is allowed to access.

Applicants' arguments:

Claims 34, 46, 49 and 52 recite subject matter not made obvious by the combination of Merjanian and Darbee et al. Claims 34, 46, 49 and 52 recite "said control keys include an activation key operable to activate the remote control device, and said fingerprint sensor is embedded in the activation key." The OFFICE ACTION states at page 11, lines 13 to 18:

"(see at least FIG. 7; it is noted that operating any of the buttons shown inherently activates the remote controller which does not need to be turned on per se with a button which is reserved only for turning on/off the remote controller)."

This inherency of Merjanian fails to make obvious the recited limitation. While the OFFICE ACTION states that the remote control of Merjanian does not need to be turned on, these claims recite "an activation key operable to activate the remote control device." Thus Merjanian not needing to be turned on does not make obvious the recited activation key. Likewise, while Darbee et al discloses power supply 30, supervisory circuit 31 and batteries 32, it fails to disclose that activation of any key is necessary to activate the remote control unit. The OFFICE ACTION states at: page 12, lines 16 to 21; page 12, lines 17 to 22; and page 13, lines 20 to 25:

"However, in an analogous art, Darbee teaches a remote control device with an OK, or PWR control key (see at least FIG. i) for the purpose of selectively downloading advertising and programming data to be stored on the remote control depending upon identification of the user of the remote control or based upon some assessment of the viewing habits or preferences of the user (3:31-39)."

Examiner's response:

The claimed "key" in the limitation "activation key" is broadly and reasonably interpreted to be a mechanism. The function "operable to activate the remote control device" of the claimed "activation key" is interpreted to be equivalent to the function performed by the combination of the fingerprint acquisition means (e.g., Merjanian, the platen 30 in FIG. 7), conveying means for conveying the fingerprint signal to the set-top box, comparison means at the set-top box for comparing the fingerprint signal to stored fingerprint data for a match and means responsive to any match for adjusting one of the service level and the preference setting to provide access to channels for which access is normally restricted (see at least 3:31-47). Thus, the above-listed combination of means of Merjanian performs the function of making the remote control become active.

Furthermore, when assigning the above-mentioned means combination to the OK button of Darbee for the purpose of enabling or activating the remote controller, download of desired materials will start subsequent to a successful validation of the id of the user, thereby providing the right materials to the right user.

Applicant's arguments:

Darbee et al includes no teaching regarding the operation of the OK key. Accordingly, this cannot make obvious the specific limitation recited in claims 34, 46, 49 and 52. Further, Darbee et al includes no teaching regarding the operation of the PWR key. The Applicants respectfully submit that one skilled in the art would believe this PWR key operates to activate the controlled device rather than the remote control device as recited in claims 34, 46, 49 and 52. Thus the cited teachings of Darbee et al teach activation of a different apparatus than recited in these claims. Merjanian and Darbee et al fail to teach that operation of a control key actuates the remote control device as required by the limitations of claims 334, 46, 49 and 51. In contrast, this application states at page 11, line to page 12, line 1:

"In another preferred embodiment, the finger print apparatus 26 is incorporated on the remote control device 41 as an 'activate remote' key that must be pressed in order for the remote to start functioning. In this embodiment, the finger print can be read when the remote control is activated."

Embedding the fingerprint sensor in such an activate remote key ensures capture of the user's fingerprint before any controlled operation. The combination of teachings cited in the OFFICE ACTION fails to make such a requirement. Accordingly, claims 34, 46, 49 and 52 are allowable over the combination of Merjanian and Darbee et al.

The OFFICE ACTION states at page 4, line 24 to page 5, line 3:

"The claimed 'key' in the limitation 'activation key' is broadly and reasonably interpreted to be a mechanism. The function 'operable to activate the remote control device' of the claimed 'activation key' is interpreted to be equivalent to the function performed by the combination of the fingerprint acquisition means (e.g., Merjanian, the platen 30 in FIG. 7), conveying means for conveying the fingerprint signal to the set-top box, comparison means at the set-top box for comparing the fingerprint signal to stored fingerprint data for a match and means responsive to any match for adjusting one of the service level and the preference setting to provide access to channels for which access is normally restricted (see at least 3:31-47). Thus, the above-listed combination of means of Merjanian performs the function of making the remote control become active."

The OFFICE ACTION further states at page 6, lines 3 to 5:

"Only a successful authentication could activate the remaining keys on the remote controller to perform their pre-programmed functions when the keys are being pressed on."
Merjanian states at column 3, lines 39 to 47 (overlapping the portion cited in the OFFICE ACTION):

"The combination allows the service level to be adjusted in response to a fingerprint match to provide access to channels for which access is normally restricted, for example, so that children or house guests—whose fingerprint data are unknown to the system—can not order pay-per-view events or other services without the assistance of an authorized person—whose fingerprint data are known and configured to authorize such access."

The existence of "channels for which access is normally restricted" implies the existence of channels for which access is not restricted that can be selected by children and house guests. Thus there are some channels that can be viewed without the verification of fingerprint required for the "normally restricted" channels.

Thus the device of Merjanian can operate without detecting a fingerprint in platen 30. This contradicts the above quoted limitation of claims 34, 46, 49 and 52. The Applicants submit that the combination of the fingerprint sensor and the activation key of claims 34, 46, 49 and 52 prevents use of the remote control without producing a non-participatory identification of the user as taught in the application. Accordingly, claims 34, 46, 49 and 52 are not made obvious by the combination of Merjanian and Darbee et al.

Examiner's response:

The examiner agrees with Applicants that the PWR key is used to activate a controlled device, e.g., the set-top box. As for the OK button in FIG. 1 of Darbee, although there is no specific description of the function of the OK key in Darbee, the commonly known equivalent of the OK key is the "Enter" key on any standard remote controller. The OK key can be modified to incorporate the Merjanian's combination of means for verifying the user's

fingerprint and granting the user access to the set-top box if the fingerprint matches with the stored fingerprint of the authorized user. Only a successful authentication could activate the remaining keys on the remote controller to perform their pre-programmed functions when the keys are being pressed on.

Thus, the combination Merjanian-Darbee appears to meet the claim requirements and give a reasonable expectation of success.

In response to Applicant's argument that because:

“... there are some channels that can be viewed without the verification of fingerprint required for the "normally restricted" channels[.]
[t]hus the device of Merjanian can operate without detecting a fingerprint in platen 30 [;]
this contradicts the above quoted limitation of claims 34, 46, 49 and 52,”

it is respectfully noted that contrary to Application's arguments, the remote controller of the combination Merjanian-Darbee (not merely *the device of Merjanian*” as submitted by Applicant) would not operate without the OK key being pressed. Which channels can be viewed depend upon which fingerprints are detected. Therefore, the teachings of the combination Merjanian-Darbee does not contradict the requirements of claims 32, 46, 49 and 52.

Applicants' arguments:

Claims 55 to 58 were rejected under 35 U.S.C. 103(a) as made obvious by the combination of Merjanian U.S. Patent No. 5,920,642, Darbee et al U.S. Patent No. 6,130,726 and Catalano et al U.S. Patent No. 6,766,040.

Claims 55 to 58 each recite a sleep mode. Neither Merjanian nor Darbee et al disclose the claimed sleep mode forgetting fingerprint data or that return from sleep mode re-acquires fingerprint data. Catalano et al does teach a sleep mode. However, the events which trigger entering the sleep mode and exiting the sleep mode in Catalano et al are not the same as the events noted in claims 55 to 58.

Claims 55 to 58 recite subject matter not made obvious by the combination of Merjanian, Darbee et al and Catalano et al. Claims 55 to 58 each recite "enter a sleep mode and forget fingerprint sensor data if none of said plurality of control keys is operated for a predetermined period of time." Catalano et al states at column 17, lines 48 to 53:

"Verification is ended, as depicted by step 446, after the results of the comparison are sent to the external device 140. Thereafter, sensor 130 is returned to the sleep mode, as

indicated by step 300 (FIG. 3), and device 100 draws almost no power until the next request is received from external device 140 for a fingerprint verification."

Catalano et al teaches entering the sleep mode upon acquisition of the fingerprint via sensor 130. Catalano et al does not teach any control keys on device 100. Thus Catalano et al fails to teach that activation of any of a plurality of control keys can keep device out of sleep mode of a predetermined period of time as required by this limitation of claims 55 to 58. Accordingly, claims 55 to 58 are allowable over the combination of Merjanian, Darbee et al and Catalano et al.

Claims 55 to 58 recite further subject matter not made obvious by the combination of Merjanian, Darbee et al and Catalano et al. Claims 55 to 58 each recite "re-activate from said sleep mode upon operation of said activation key and re-acquiring fingerprint data via said fingerprint sensor." Respective base claims 34, 46, 49 and 52 require this activation key to be a part of the device including the fingerprint sensor. Catalano et al states at column 6, lines 22 to 32:

"Turning now to FIGS. 1 and 3, in normal operation device 100 remains in "sleep" mode to conserve power, as indicated by step 300 in FIG. 3. However, if at step 302 a determination is made that interface 150 has received a request from external unit 140 to receive and capture a fingerprint, then device 100 is "awakened," i.e., powered up, as indicated at step 304. Typically, external unit 140 sends a command packet to interface 150 requesting device 100 to sense and capture the fingerprint. Logic unit 110 receives and decodes the command packet and sends a signal that activates sensor 130."

Catalano et al teaches exiting the sleep mode upon a request from external unit 140. Catalano et al does not teach any control keys on device 100. Thus Catalano et al fails to teach that activation of a particular control keys causes the device to re-activate from the of sleep mode as required by this limitation of claims 55 to 58. Accordingly, claims 55 to 58 are allowable over the combination of Merjanian, Darbee et al and Catalano et al.

Examiner's response:

In response to Applicant's arguments that "events which trigger entering the sleep mode and exiting the sleep mode in Catalano et al are not the same as the events noted in claims 55 to 58" and activation of a particular control keys causes the device to re-activate from the of sleep mode as required by this limitation of claims 55 to 58," the examiner respectfully notes that Applicant's claim requires that if none of the plurality of control keys is operated for a predetermined period of time, the electronic circuitry is operable to enter a sleep mode and re-activate from sleep mode upon operation of the activation key and re-acquire fingerprint data via the fingerprint sensor. These requirements appear to be met by the combination Merjanian-Darbee-Catalano since the combination Merjanian-Darbee teaches at least a control key such as the OK key and Catalano teaches that the sensor (e.g., fingerprint detector) is returned to the sleep mode until the next request

for fingerprint verification (see 17:50-53 and discussion in the Office action regarding Claims 55-58).

According the foregoing discussion, the rejection of Claims 1, 10, 12, 29, 34, 46, 49, 52 and 55-58 as being unpatentable over the combination Merjanian-Darbee-Catalano is considered still proper and thus maintained.

Claim Rejections – 35 USC § 103

4. The following is a quotation of the 35 U.S.C. § 103(a) which form the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 10, 12, 29, 34, 46, 49 and 52 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,920,642 to Merjanian (art of record) in view of U.S. Patent No. 6,130,726 to Darbee et al. (“Darbee”) (art of record).

Claim 1

Merjanian discloses *a system for user recognition and customized content provisioning, the system comprising:*

a remote control device having a plurality of control keys, the remote control device including a fingerprint sensor embedded in one of said control keys, whereby activation of said one of said control keys reads fingerprint data of a user's finger (see at least FIG. 7); and

an apparatus capable of presenting customized content to the user controllable by activation of said plurality of control keys, the customized content selected dependent upon said fingerprint data of the user's finger (see at least 3:27-53).

Merjanian does not specifically disclose *said control keys including at least some control keys disposed in a thumb actuated cross configuration, and wherein said fingerprint sensor is integrated within a middle portion of the thumb operated cross configuration.* However, in an analogous art, Darbee teaches a remote control device with an OK, or PPV control key disposed within the middle portion of the thumb operated cross configuration (see at least FIG. 1) for the purpose of selectively downloading advertising and programming data to be stored on the remote control depending upon identification of the user of the remote control or based upon some assessment of the viewing habits or preferences of the user (3:31-39), or selecting the PPV option. Because of the nature of the downloaded materials that depend upon the identification of the user, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to integrate the fingerprint sensor of Merjanian within the OK or PPV control key as this would enable or activate the remote controller to download the materials subsequent to a successful validation of the id of the user, thereby providing the right materials to the right user.

Claim 10

Merjanian discloses *an apparatus for content provisioning comprising:*

means for acquiring data related to a user without active user input or participation, the means for acquiring data including a remote control device having a plurality of control keys and a fingerprint sensor (see at least FIG. 7; as for the limitation without active

user input or participation, the Office's interpretation of this requirement is that the user does not have to actively input any information or actually press any key to have the sensor read the fingerprint of the user as described by Merjanian at 11:30-31 – the user only need placing his/her digit on the sensor); and

means for presenting customized content to the user controllable by activation of said plurality of control keys, said customized content selected in response to said fingerprint data of the user's finger (see at least 3:27-53).

Merjanian does not specifically disclose that *the fingerprint sensor is embedded in one of the control keys and whereby activation of said one of said control keys reads fingerprint data of a user's finger, said control keys including at least some control keys disposed in a thumb actuated cross configuration, and said fingerprint sensor is integrated within a middle portion of the thumb operated cross configuration*. However, in an analogous art, Darbee teaches a remote control device with an OK, or PPV control key disposed within the middle portion of the thumb operated cross configuration (see at least FIG. 1) for the purpose of selectively downloading advertising and programming data to be stored on the remote control depending upon identification of the user of the remote control or based upon some assessment of the viewing habits or preferences of the user (3:31-39), or selecting the PPV option. Because of the nature of the downloaded materials that depend upon the identification of the user, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to integrate the fingerprint sensor of Merjanian within the OK or PPV control key as this would enable or activate the remote controller to download the materials subsequent to a successful validation of the id of the user, thereby providing the right materials to the right user.

Claim 12

Merjanian discloses *a television system comprising:*

a remote control device having a plurality of control keys, the remote control device including a fingerprint sensor (see at least FIG. 7);

a processor communicatively coupled to the remote control device, the determining characteristics of the user based upon the fingerprint data (see at least 11:17 – 12:14); and

a display providing content to be viewed by the user, the content being customized for the user based upon the characteristics determined by the processor (see at least 3:27-53 and 11:17 – 12:14).

Merjanian does not specifically disclose that *the fingerprint sensor is embedded in one of the control keys and whereby activation of said one of said control keys reads fingerprint data of a user's finger, said control keys including at least some control keys disposed in a thumb actuated cross configuration, and said fingerprint sensor is integrated within a middle portion of the thumb operated cross configuration.* However, in an analogous art, Darbee teaches a remote control device with an OK, or PPV control key disposed within the middle portion of the thumb operated cross configuration (see at least FIG. 1) for the purpose of selectively downloading advertising and programming data to be stored on the remote control depending upon identification of the user of the remote control or based upon some assessment of the viewing habits or preferences of the user (3:31-39), or selecting the PPV option. Because of the nature of the downloaded materials that depend upon the identification of the user, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to integrate the fingerprint sensor of Merjanian within the OK or PPV control key as this would enable or activate the remote controller to download the materials subsequent to a successful validation of the id of the user, thereby providing the right materials to the right user.

Claim 29

Merjanian discloses *a remote control device comprising:*

a housing (see at least FIG. 7);

electronic circuitry disposed within the housing (see at least FIG. 7);

a signal transmitter disposed within the housing (see at least FIG. 7);

a plurality of control keys disposed on an outer surface of the housing, at least some of the control keys operable by hand (see at least FIG. 7).

Merjanian does not specifically disclose *at least some control keys disposed in a thumb actuated cross configuration; and a fingerprint sensor integrated within a middle portion of the thumb operated cross configuration control keys*. However, in an analogous art, Darbee teaches a remote control device with an OK, or PPV control key disposed within the middle portion of the thumb operated cross configuration (see at least FIG. 1) for the purpose of selectively downloading advertising and programming data to be stored on the remote control depending upon identification of the user of the remote control or based upon some assessment of the viewing habits or preferences of the user (3:31-39), or selecting the PPV option. Because of the nature of the downloaded materials that depend upon the identification of the user, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to integrate the fingerprint sensor of Merjanian within the OK or PPV control key as this would enable or activate the remote controller to download the materials subsequent to a successful validation of the id of the user, thereby providing the right materials to the right user.

Claim 34

Merjanian discloses a device comprising:

a housing (see at least FIG. 7);

electronic circuitry disposed within the housing (see at least FIG. 7);

a signal transmitter disposed within the housing (see at least FIG. 7);

*a plurality of control keys disposed on an outer surface of the housing, at least some of the control keys operable by hand, the control keys including an activation key operable to activate ~~the~~ a remote control device (see at least FIG. 7; it is noted that operating any of the buttons shown inherently activates the remote controller which does not need to be turned on *per se* with a button which is reserved only for turning on/off the remote controller).*

Merjanian does not specifically disclose that the fingerprint sensor is *integrated within the activation key*. However, in an analogous art, Darbee teaches a remote control device with an OK, or PWR control key (see at least FIG. 1) for the purpose of selectively downloading advertising and programming data to be stored on the remote control depending upon identification of the user of the remote control or based upon some assessment of the viewing habits or preferences of the user (3:31-39). Because of the nature of the downloaded materials that depend upon the identification of the user, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to integrate the fingerprint sensor of Merjanian within the OK or PWR control key as this would enable or activate the remote controller to download the materials subsequent to a successful validation of the id of the user, thereby providing the right materials to the right user.

Claim 46

Merjanian discloses *a system for user recognition and customized content provisioning, the system comprising:*

a remote control device having a plurality of control keys, the remote device including a fingerprint sensor (see at least FIG. 7);

an apparatus capable of presenting customized content to the user controllable by activation of said plurality of control keys, the customized content selected dependent upon said fingerprint data of the user's finger (see at least (see at least 3:27-53).

Merjanian does not specifically disclose that the fingerprint sensor is *embedded in one of said control keys, whereby activation of said one of said control keys reads fingerprint data of a user's finger, said control keys include an activation key operable to activate the remote control device, and said fingerprint sensor is embedded in the activation key.* However, in an analogous art, Darbee teaches a remote control device with an OK, or PWR control key (see at least FIG. 1) for the purpose of selectively downloading advertising and programming data to be stored on the remote control depending upon identification of the user of the remote control or based upon some assessment of the viewing habits or preferences of the user (3:31-39). Because of the nature of the downloaded materials that depend upon the identification of the user, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to integrate the fingerprint sensor of Merjanian within the OK or PWR control key as this would enable or activate the remote controller to download the materials subsequent to a successful validation of the id of the user, thereby providing the right materials to the right user.

Claim 49

Merjanian discloses *an apparatus for content provisioning comprising:*

means for acquiring data related to a user without active user input or participation, the means for acquiring data including a remote control device having a plurality of control keys and a fingerprint sensor (see at least FIG. 7; as for the limitation without active user input or participation, the Office's interpretation of this requirement is that the user does not have to actively input any information or actually press any key to have the sensor read the fingerprint of the user as described by Merjanian at 11:30-31 – the user only need placing his/her digit on the sensor).

Merjanian does not specifically disclose that the fingerprint sensor is *embedded in one of the control keys, whereby activation of said one of said control keys reads fingerprint data of a user's finger, said control keys include an activation key operable to activate the remote control device, and said fingerprint sensor is embedded in the activation key.*

However, in an analogous art, Darbee teaches a remote control device with an OK, or PWR control key (see at least FIG. 1) for the purpose of selectively downloading advertising and programming data to be stored on the remote control depending upon identification of the user of the remote control or based upon some assessment of the viewing habits or preferences of the user (3:31-39). Because of the nature of the downloaded materials that depend upon the identification of the user, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to integrate the fingerprint sensor of Merjanian within the OK or PWR control key as this would enable or activate the remote controller to download the materials subsequent to a successful validation of the id of the user, thereby providing the right materials to the right user.

Merjanian further discloses *means for presenting customized content to the user controllable by activation of said plurality of control keys, said customized content selected in response to said fingerprint data of the user's finger*_(see at least 3:27-53).

Claim 52

Merjanian discloses *a television system comprising:*

a remote control device having a plurality of control keys, the remote control device including a fingerprint sensor (see at least FIG. 7);

a processor communicatively coupled to the remote control device, the determining characteristics of the user based upon the fingerprint data (see at least 11:17 – 12:14); and

a display providing content to be viewed by the user, the content being customized for the user based upon the characteristics determined by the processor (see at least 3:27-53 and 11:17 – 12:14).

Merjanian does not specifically disclose that the fingerprint sensor is *embedded in one of said control keys, whereby activation of said one of said control keys reads fingerprint data of a user's finger, said control keys include an activation key operable to activate the remote control device, and said fingerprint sensor is embedded in the activation key*. However, in an analogous art, Darbee teaches a remote control device with an OK, or PWR control key (see at least FIG. 1) for the purpose of selectively downloading advertising and programming data to be stored on the remote control depending upon identification of the user of the remote control or based upon some assessment of the viewing habits or preferences of the user (3:31-39). Because of the nature of the downloaded materials that depend upon the identification of the user, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to integrate the fingerprint

sensor of Merjanian within the OK or PWR control key as this would enable or activate the remote controller to download the materials subsequent to a successful validation of the id of the user, thereby providing the right materials to the right user.

6. Claims 55-58 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,920,642 to Merjanian (art of record) in view of U.S. Patent No. 6,130,726 to Darbee et al. ("Darbee") (art of record) and further in view of U.S. Patent No. 6,766,040 to Catalano et al. ("Catalano").

Claim 55

The rejection of base claim 34 is incorporated. The combination Merjanian-Darbee does not specifically disclose *wherein*:

said electronic circuitry is operable to enter a sleep mode and forget fingerprint sensor data if none of said plurality of control keys is operated for a predetermined period of time, and

re-activate from said sleep mode upon operation of said activation key and re-acquiring fingerprint data via said fingerprint sensor.

However, Catalano teaches a device for capturing, enrolling and verifying a fingerprint, wherein in normal operation the device remains in "sleep" mode to conserve power (see at least 6:22-23 and FIGs. 3 and 5). When there is a finger present, the device reads the entire fingerprint image from the sensor and buffers the image information in dynamic memory 124 (see at least 7:8-10). After the capturing and verification are completed, the device is returned to the sleep mode and draws almost no power until the next request is received for a fingerprint verification (17:50-53). Since the fingerprint image is stored in dynamic memory (i.e., RAM type of memory) when the device is returned to the sleep mode, there will not be sufficient

power to maintain the data in the dynamic memory 124, the fingerprint image data is erased by the virtue of the design of dynamic memory. Furthermore, there is no advantage to retain the fingerprint image data after the verification is completed and access is granted to the authorized person to use the device that is attached to Catalano's device. Retaining the fingerprint image would defeat the purpose of using fingerprint verification.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the sleep mode and reactivating from the sleep mode of Catalano in the combination Merjanian-Darbee for the purpose of conserving power as suggested by Catalano at 6:22-23.

Claim 56

The rejection of base claim 46 is incorporated. Since Claim 56 recites a system comprising the same features of the device claimed in Claim 55, the same rejections are applied.

Claim 57

The rejection of base claim 49 is incorporated. Since Claim 57 recites an apparatus with the same features of the device claimed in Claim 55, the same rejections are thus applied.

Claim 58

The rejection of base claim 52 is incorporated. Since Claim 58 recites a television system with the same features of the device recited in Claim 55, the same rejections are thus applied.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Hoang-Vu A. Nguyen-Ba whose telephone number is (571) 272-3701. The Examiner can normally be reached on Tuesday - Friday from 7:00 – 17:30.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, John Miller can be reached at (571) 272-7353.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2600 Group receptionist: 571-272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hoang-Vu Antony Nguyen-Ba/
Primary Examiner, Art Unit 2623

March 27, 2008